

# SCIENCE

---

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

---

NEW SERIES. VOLUME XXXI

JANUARY-JUNE, 1910

---

NEW YORK  
THE SCIENCE PRESS  
1910

---

THE NEW ERA PRINTING COMPANY,  
41 NORTH QUEEN STREET,  
LANCASTER, PA.

---

# CONTENTS AND INDEX.

NEW SERIES. VOL. XXXI.—JANUARY TO JUNE, 1910.

*The Names of Contributors are printed in Small Capitals.*

ABBOT, C. G., Water Vapor on Mars, 987  
ABBOTT, J. F., Metaphysics and Mendelism, 68;  
    Why Pawlow? 580; Silkworms, 586  
Adaptation, T. H. MORGAN, 201  
Aerator, Aquarium, A. A. SCHAEFFER, 955  
Air Currents in Mountain Valleys, F. E. MATTHES,  
    577  
AITKEN, R. G., Geometrical Canals of Mars, 114  
ALBRECHT, S., Spectrum of Mars, 990  
ALDRICH, J. M., Carnegie Foundation, 538  
ALLARD, H. A., Aphidian Notes, N. Georgia, 426  
ALLEN, J. A., Sharpe's Handlist of Birds, 265  
ALLER, H. D., Biol. Station at Beaufort, N. C., 712  
Allis, Jr., E. P., Mail-cheeked Fishes, J. B. JOHNS-  
    TON, 148  
American Assoc. for the Advancement of Science,  
    Section B, 1, 588, 729; Section C, 41; Sec-  
    tion G, 52, 632, 641, 644, 648, 681, 685;  
    Report of General Secretary, 76; Section D,  
    81, 396; Section K, 93, 276; Section L, 121,  
    591, 688, 721, 729, 731, 761; Section A, 153;  
    Section H, 171, 350; Section E, 241; Section  
    F, 277; Section I, 879  
Amphibia, of Mazon Creek Shales, R. L. MOODIE,  
    233; in Modern Sense, T. GILL, 958  
Anthraenose, Cotton, H. W. BARRE, 68  
Anthropological Soc. of Wash., J. R. SWANTON,  
    37, 159; I. M. CASANOWICZ, 239, 360, 399,  
    559, 677, 839  
Anthropology at the Amer. Assoc., 350  
ARTOWSKI, H., Climatic Changes, 25; Atmospheric  
    Pressure, 427  
Ascaris, Chromosomes in, C. L. EDWARDS, 514  
Asphyxia, Effect on the Pupil, C. C. and F. V.  
    GUTHRIE, A. H. RYAN, 395; J. AUER, 578; C.  
    C. GUTHRIE, 859  
Association of Teachers of Math. of Middle States,  
    N. Y. Sect., E. R. SMITH, L. G. SIMONS, 80  
Astronomical Course at Columbia, Marking Sys-  
    tem, H. JACOBY, 819; Observatory of Denison  
    University, 983  
ATKINSON, G. F., Buller on Fungi, 420  
Atmospheric Pressure, H. ARCTOWSKI, 427  
ATWOOD, W. W., Chicago Acad. of Sci., 358  
AUER, J., Asphyxia and the Pupil, 578  
Austen, E. E., African Blood-sucking Flies, H. B.  
    WARD, 904  
Bacteria in the Tropics, O. LOEW, 988  
Bacteriologists, Amer. Soc. of, N. MACL. HARRIS,  
    545  
BAEKELAND, L. H., Science and Industry, 841  
BAKER, F. C., Free Public Museums, 221; Life of  
    Glacial Lake Chicago, 715  
BANKS, N., Notes on Entomology, 432  
Barnes, Charles Reid, H. C. COWLES, 532  
BARNES, H. T., Surface Ice in Lakes, 856  
BARNETT, S. J., Lecture Galvanometer, 232;  
    Richartz's Anfangsgründe der Maxwellischen  
    Theorie verknüpft mit der Elektronentheorie,  
    267  
BARRE, H. W., Cotton Anthraenose, 68  
BARUS, C., Variations Graphically, 867; and M.  
    BARUS, Interference of Rays of Plane Trans-  
    parent Grating, 394  
BASKERVILLE, C., Sir William Crookes, 100  
BASTIN, E. S., Geol. Soc. of Washington, 516, 598,  
    758  
BAUER, L. A., Magnetic Work of British Antarctic  
    Expedition, 668  
BAUMGARTNER, W. J., Teaching of Zoology, 673  
BECKER, G. F., Halley on Age of Ocean, 459;  
    Joly on Age of Ocean, 509  
BELL, A. G., Langley Medal, 321  
BERG, W. N., Conservation of National Health, 611  
BESSEY, C. E., Greene's Botanical History, 69;  
    Botanical Notes, 512, 584, 710, 908  
BIGELOW, M. A., Zoology at the Amer. Assoc., 277  
Biological, Soc. of Wash., M. C. MARSH, 36; D. E.  
    LANTZ, 238, 359, 479, 519, 679; Marine Sta-  
    tion at Beaufort, N. C., H. D. ALLER, 712  
Biology, and Medicine, Exper., Soc. for, E. L.  
    OPIE, 119, 679, 719, 917  
BIRDSEYE, C. F., Higher Education Association, 721  
BISELL, G. W., Botany at the Amer. Assoc., 396  
BLAKESLEE, A. F., Botanic Garden as Field Mu-  
    seum of Agriculture, 685; Marchal on Apos-  
    porie et Sexualité chez les Mousses, 905  
Blood Picture, New, M. A. REED, 629  
Botanical, Soc. of Wash., W. W. STOCKBERGER, 38,  
    78, 360, 676, 880; of Amer., G. T. MOORE, 433;  
Education, W. F. GANONG, 321; Notes, C. E.  
    BESSEY, 512, 584, 710, 908; Educational In-  
    formation Wanted, W. F. GANONG, 539; Gar-  
    den, and the Public, N. L. BRITTON, 641; and  
    Collegiate Instruction, W. F. GANONG, 644;  
    University, D. S. JOHNSON, 648; Administra-  
    tion of, W. TRELEASE, 681; as Field Museum  
    of Agriculture, A. F. BLAKESLEE, 685  
Botany, at the Amer. Assoc., G. W. BISSELL, 396;  
    H. C. COWLES, 632; in its Relations to Agri-  
    cultural Advancement, C. V. PIPER, 889  
BRADLEY, J. C., Entom. Soc. of Amer., 597  
BRANNER, J. C., Luminosity of Termites, 24;  
    Chamberlin and Salisbury's Geology, 146  
Breathing, G. M. WHIPPLE, 26  
BRITTON, N. L., Botanical Gardens, 641  
Brooklyn Botanic Garden, 452  
BROWN, E., Official Seed Analysts, 477, 598  
Bug, Green, and its Enemies, S. J. HUNTER, 190  
Buller, A. H. R., Fungi, G. F. Atkinson, 420  
BUMSTEAD, H. A., The University Laboratory, 361  
BURNHAM, W. H., Mental Activity, 761

CAMPBELL, W. W., and S. ALBRECHT, Mars, 990  
 Canal-ray Effects, F. E. NIPHER, 628  
 CARLSON, A. J., Amer. Physiol. Soc., 397  
 Carnegie, Foundation for Advancement of Teaching, 63, 281, 780; Annual Report, 339; and Service Pensions, J. JASTROW, 370; J. McK.  
 CATTELL, 384; W. H. HOBBS, 502; Z., 784; Retrospective Anticipations of, A. O. LOVEJOY, 414; Additional Considerations, J. M. ALDRICH, 538; and University of Minnesota, X., 701; Institution of Washington, 377  
 CARY, E. P., and H. W. FAIRBANKS, Glaciation, 32  
 CASANOWICZ, I. M., Anthropol. Soc. of Wash., 239, 360, 399, 559, 677, 839  
 CATTELL, J. McK., Length of Service Pensions of Carnegie Foundation, 384  
 Chamberlin, T. C., and R. D. Salisbury, Geology, J. C. BRANNER, 146  
 Chemical, Soc. of Wash., J. A. LECLERC, 79, 280, 480, 799, 960; Amer., N. Y. Sect., C. M. JOYCE, 80, 120, 400, 520, 720, 880; R. I. Sect., A. W. CLAFLIN, 120, 240, 560, 680, 800; Boston Meeting, 161; Northeastern Sect., K. L. MARK, 240, 920; F. E. GALLAGHER, 560; Cleveland Sect., N. A. DUBOIS, 240; General Meeting, D. L. RANDALL, 268, 307; Summer Meeting, 613; Regulation of Processes of the Body, W. H. HOWELL, 93; Industries of Amer., C. E. MUNROE, 561  
 Chemistry, Municipal, 20; of Light, W. R. WHITNEY, 161; Int. Congress of Applied, 292; Kahlenberg's, A. J. HOPKINS, 539; J. L. HOWE, 666; Correlation of Secondary School and College Instruction, H. P. TALBOT, 961; High School, J. E. WHITSIT, 974; in Secondary Schools, M. D. SOHON, 979  
 Chicago Acad. of Sci., W. W. ATWOOD, 358  
 Cisco from Lake Michigan, G. WAGNER, 957  
 CLAFLIN, A. W., R. I. Sect., Amer. Chem. Soc., 120, 240, 560, 680, 800  
 CLARK, A. H., Priority and Generic Names, 145  
 CLARK, C. M., Cross Wires in Spectroscope, 344  
 Climatic Changes, H. ARCTOWSKI, 25  
 COCKERELL, T. D. A., Civilization of Bohemia, 145; Coulter on Botany of Central Rocky Mountains, 301; Pettigrew's Design in Nature, 707; Wheeler on Ants, 860  
 COLE, A. D., Physics at the Amer. Assoc., 588  
 COLE, F. N., Amer. Math. Soc., 118, 478, 800; Taschenbuch für Mathematiker, 223  
 Collegiate Instruction, E. L. THORNDIKE, 428  
 Colletotrichum falcatum, C. W. EDGERTON, 717  
 Comets, Study of, W. J. HUMPHREYS, 226; Nature of, and Relation to Sun, E. THOMSON, 772  
 COMSTOCK, D. F., Principle of Relativity, 767  
 CONN, H. W., Poulton on Charles Darwin and the Origin of Species, 424  
 Conn, H. W., Agricultural Bacteriology, H. L. RUSSELL, 787  
 COOK, M. T., Houard on Les Zooecidies, 27  
 COULTER, J. M., Practical Science, 881  
 Coulter, J. M., Botany of Central Rocky Mountains, T. D. A. COCKERELL, 301  
 Coupin, H., and J. Lea, Animal Ingenuity, M. F. WASHBURN, 951  
 COWLES, H. C., Charles Reid Barnes, 532; Botany at the Amer. Assoc., 632  
 CRATHORNE, A. R., Continuous Girders, 675  
 CREW, H., Debt of Physics to Metaphysics, 521  
 CROOK, A. R., Free Public Museums, 579  
 Crookes, Sir William, C. BASKERVILLE, 100  
 CROWELL, J. F., Social and Economic Science at the Amer. Assoc., 879  
 Cruise, First, of the "Carnegie," 73  
 DALL, W. H., National Antarctic Expedition, 989  
 Davidson, A., The Human Body, T. STOREY, 115  
 DAVIS, W. M., Geographical Description, 921  
 DEAN, B., Goodrich on Cyclostomes and Fishes, 264; Lamarek Manuscript at Harvard, 394  
 Dental Curriculum, E. C. KIRK, 481  
 DEWEY, J., Science as Subject-matter and as Method, 121  
 Dipylidium caninum in Child, W. A. RILEY, 349  
 Discussion and Correspondence, 24, 68, 109, 143, 190, 218, 263, 297, 344, 384, 414, 456, 500, 538, 577, 617, 665, 701, 739, 784, 815, 856, 950, 987  
 Doflein, F., Protozoenkunde, C. A. KOFOID, 456  
 DONCASTER, L., Gametogenesis of Sawfly, 192  
 DUBOIS, N. A., Cleveland Sect. Amer. Chem. Soc., 240  
 DYAR, H. G., Lepidoptera Phalaenæ of British Museum, 117, 990  
 Dynamics in the High School, F. T. JONES, 220  
 Earth Movements, W. H. HOBBS, 306  
 Edentates, Classification of, H. H. LANE, 913  
 EDGERTON, C. W., Colletotrichum falcatum, 717  
 Education, at the Amer. Assoc., C. R. MANN, 591; Relation of Applied Science to, C. G. HOPKINS, 655; Assoc., Higher, C. F. BIRDSEYE, 721; Board, General, 852  
 EDWARDS, C. L., Chromosomes in Ascaris, 514  
 EICHELBERGER, W. S., Washington Zones, 461  
 EIGENMANN, C. H., Queer Fish, 456  
 EMBODY, G. C., Food of King Eider, 630  
 Engineering, as a Profession, G. F. SWAIN, 81; Student Statistics, R. TOMBO, JR., 145  
 Ennis, W. D., Linseed Oil, A. H. GILL, 951  
 Entomological Soc. of Amer., J. C. BRADLEY, 597  
 Entomologists, Econ., Amer. Assoc. of, 516  
 Entomology, Notes on, N. BANKS, 432  
 Esperanto and Scientists, J. D. HAILMAN, 112  
 Eucynopotamus, H. W. FOWLER, 790  
 EVERMANN, B. W., and W. I. LEMBKY, Fur-seals Domesticated, 34  
 Evolution of Intelligence, C. J. HERRICK, 7  
 FAIRBANKS, H. W., and E. P. CARY, Glaciation in California, 32  
 FAIRCHILD, D., Amer. Research Institution in Palestine, 376  
 FARIS, R. L., Philos. Soc. of Wash., 79, 278, 438, 557, 757, 919, 959  
 FAUTH, P., The Moon, C. L. P., 69  
 FAWCETT, H. S., Fungus of Citrus Whitefly, 912  
 Federation, Amer., of Teachers of Math. and Natural Sciences, C. R. MANN, 515  
 FELT, E. P., Maxwell-Lefroy's Indian Insect Life, 625  
 Field, C., Submarine, C. H. PEABODY, 743  
 Fish, Queer, C. H. EIGENMANN, 456  
 Fishes, Pennsylvania, H. W. FOWLER, 345; Apodal, Structural Characteristics, T. GILL, 789

Fixing Fluid for Plant Tissues, R. R. GATES, 234  
 Flies as Transmitters of Disease, E. W. GUDGER, 31; W. A. RILEY, 263  
 Force, W. KENT, 820; F. E. NIPHER, 950  
 FOWLER, H. W., Pennsylvania Fishes, 345; Restriction of *Eucynopotamus*, 790  
 Fracastorius, Athanasius Kircher and Germ Theory of Disease, F. H. GARRISON, 500  
 FREAR, W., Leach's Food Inspection, 386  
 Friese, H., African Bees, W. M. WHEELER, 580  
 Fungi, Parasitic, F. D. KERN, 830  
 Fungus of Citrus Whitefly, H. S. FAWCETT, 912  
 Fur-seals, Alaskan, 18; Domesticated, B. W. EVERMANN, W. I. LEMBKEY, 34

G., J. L., Godfrey's Elementary Chemistry, 582  
 G., L. P., Robert Parr Whittfield, 774  
 GAGER, C. S., de Vries on Mutation Theory, 740  
 GALLAGHER, F. E., N. E. Sect. Amer. Chem. Soc., 560  
 Galvanometer, Lecture, S. J. BARNETT, 232  
 Gametogenesis of Sawfly, L. DONCASTER, 192  
 GANONG, W. F., Botanical Education, 321; Botanical Gardens, 644  
 Garrett, A. E., Periodic Law, F. P. VENABLE, 29  
 GARRETT, A. O., Utah Acad. of Sciences, 720  
 GARRISON, F. H., Fracastorius, Athanasius Kircher and Germ Theory of Disease, 500, 857  
 GATES, R. R., *Oenothera Lamarckiana*, 425  
 Gaupp, E., Die Normalen Asymmetrien des Menschlichen Körpers, A. HRDLIČKA, 583  
 Generic Names, Priority in, A. H. CLARK, 145  
 Geographical Description, W. M. DAVIS, 921  
 Geological Soc. of Wash., F. E. MATTHES, 319, 518, 718; E. S. BASTIN, 516, 598, 758  
 Geologists, Int. Congress of, 450  
 George Washington Memorial Building, 661  
 Germ Theory of Disease, H. SKINNER, 617; Kircher and, W. A. RILEY, 666; F. H. GARRISON, 500, 857  
 GILL, A. H., Ennis on Linseed Oils, 951  
 GILL, T., Structural Characteristics of Apodal Fishes, 789; Amphibia in Modern Sense, 958  
 Girder, Continuous, Bending Moment at any Support, A. R. CRATHORNE, 675  
 Glacial Lake Chicago, Life of, F. C. BAKER, 715  
 Glaciation, in California, H. W. FAIRBANKS, E. P. CARY, 32; Southernmost in U. S., D. W. JOHNSON, 218  
 GLASER, O. C., Von Uexküll's Umwelt und Innenwelt der Tiere, 303  
 Godfrey, H., Elementary Chemistry, J. L. G., 582  
 GOODE, J. P., Geographical Atlases in Library of Congress, 906  
 Goodrich, E. S., Cyclostomes and Fishes, B. DEAN, 264  
 GRATACAP, L. P., Bulletin of Amer. Museum of Natural History, 708  
 GREENLY, A. W., Shackleton's on the Antarctic, 822  
 Greene, E. L., Botanical History, C. E. BESSEY, 69  
 Group as Stimulus to Mental Activity, W. H. BURNHAM, 761  
 GRUENBERG, B. C., Facts vs. Advancement of Science, 579  
 GUDGER, E. W., Flies as Transmitters of Disease, 31; North Carolina Acad. of Sci., 914  
 GULICK, L. H., Constructive Hygiene, 801  
 GUTHRIE, C. C. and F. V., and A. H. RYAN, Effect of Asphyxia on the Pupil, 395, 859

HAILMAN, J. D., Scientists and Esperanto, 112  
 Halley on Age of Ocean, G. F. BECKER, 459  
 Hann, J., Klimatologie, R. DEC. WARD, 305  
 HARRIS, G. D., Lower Tertiaries of Louisiana, 502  
 HARRIS, N. MACL., Soc. of Amer. Bacteriologists, 545  
 Harvard, College, Concentration and Distribution of Studies in, 21; Public Lectures, 62; Graduate School, R. TOMBO, JR., 621  
 Health, National, Conservation of, W. N. BERG, 611; Public, Department of, 613  
 HEGNER, R. W., Mich. Acad. of Sci., Sect. Zool., 840  
 HERRICK, C. J., Evolution of Intelligence, 7  
 HOBBS, W. H., National Bureau of Seismology, 260; Earth Movements in Central East Africa, 306; Length of Service Pensions of Carnegie Foundation, 502  
 Hodson, F., Science Teaching, C. R. MANN, 706  
 HOLLAND, W. J., Distribution of Butterflies, 346; Fauna of British India, 627  
 HOPKINS, A. J., Kahlenberg's Chemistry, 539  
 HOPKINS, C. G., Applied Science and Education, 655  
 Houard, C., Les Zoocécidies, M. T. COOK, 27  
 HOVEY, E. O., So-called Norwood Meteorite, 298  
 HOWE, J. L., Kahlenberg's Chemistry, 666  
 HOWELL, W. H., Chemical Regulation of Processes of Body, 93; Kastle on Oxidases, 504  
 HRDLIČKA, A., Gaupp's Die Normalen Asymmetrien des Menschlichen Körpers, 583  
 Hubrecht, A. A. W., Die Säugetierontogenese, W. E. RITTER, 542  
 HUMPHREYS, W. J., Study of Comets, 226  
 HUNT, R., Amer. Soc. for Pharmacol. and Exper. Therapeut., 236  
 HUNTER, S. J., The Green Bug, 190  
 HUNTER, W. D., Mexican Cotton-boll Weevil, 151  
 HUSSAKOF, L., N. Y. Acad. of Sci., Biology, 439, 600, 640, 918  
 HYDE, E. P., Steinmetz on Radiation, Light and Illumination, 540  
 Hygiene, L. H. GULICK, 801

Ice, Surface, Sinking of, H. T. BARNES, 856  
 Illinois Acad. of Sci., A. R. CROOK, 477  
 Images, Double, F. E. NIPHER, 152  
 Incomes of College Graduates, H. A. MILLER, 199  
 Indiana Acad. of Sci., J. H. RANSOM, 355  
 Interference of Rays of Plane Transparent Grating, C. and M. BARUS, 394

JACOBY, H., A Marking System, 819  
 JASTROW, J., Carnegie Foundation and Service Pensions, 370  
 JESPERSEN, O., International Language, 109  
 Jesup, Morris K., Memorial, H. F. OSBORN, 337  
 JOHNSON, D. S., University Botanical Garden, 648  
 JOHNSON, D. W., Glaciation in U. S., 218  
 JOHNSTON, J. B., Allison Mail-cheeked Fishes, 148  
 JONES, A. T., Ball Lightning, 144  
 JONES, F. T., Dynamics in High School, 220  
 Jordan, D. S., Story of Matka, V. L. K., 543  
 JORDAN, E. O., Students in German Universities, 137

JOYCE, C. M., N. Y. Sect. of Amer. Chem. Soc., 80, 120, 400, 520, 720, 880

K., V. L., Jordan's Story of Matka, 543; Poulton on the Origin of Species, 903

KAHLENBERG, L., Study of Solutions, 41

Kahlenberg, L., Chemistry, G. N. LEWIS, 193

Kansas Acad. of Sci., J. T. LOVEWELL, 357

Karsten, G., and F. Oltmanns, Pharmakognosie, H. KRAEMER, 28

KELLOGG, V. L., Mallophagan Parasites, 33

KEMP, G. T., Physiology and Exper. Med. at the Amer. Assoc., 276

KENT, W., Definition of Force, 820

KERN, F. D., Parasitic Fungi, 830

KIRK, E. C., Cultural Factor in Dental Curriculum, 481

KLEM, M. J., St. Louis Acad. of Sci., 120

KLOTZ, O., Plankton, 857

KNAB, F., Mosquito Habits and Control, 868

KNOWER, H. McE., Boston Meeting of Amer. Soc. Naturalists, 234

KOFOID, C. A., Doflein's Lehrbuch der Protozoenkunde, 456; Eyferth's Einfachste Lebensformen des Tier- und Pflanzenreiches, 671

KRAEMER, H., Karsten and Oltmanns on Pharmakognosie, 28

Kuser Asiatic Expedition, 19

Laboratory, University, H. A. BUMSTEAD, 361

Lamarck Manuscript, Date of, B. DEAN, 394

LANE, H. H., Classification of Edentates, 913

Langley Medal, A. G. BELL, 334

Language, International, O. JESPERSEN, 109

LANTZ, D. E., Biol. Soc. of Washington, 238, 359, 479, 519, 679

Leach, A. E., Food Inspection and Analysis, W. FREAR, 386

LECLERC, J. A., Chem. Soc. of Wash., 79, 280, 480, 799, 960

LEMBKEY, W. I., and B. W. EVERMANN, Fur-seals Domesticated, 34

LEWIS, G. N., Kahlenberg's Chemistry, 193

LIBBEY, W., Henry Morton Stanley, 196

Lightning, Ball, A. T. JONES, L. M. POTTS, 144

LLOYD, F. E., Spalding on Desert Plants, 863

LOEW, O., Bacteria in the Tropics, 988

LORENTZ, H. A., Electrons, A. P. WILLS, 221

LOUGHLIN, G. F., Norwood Meteorite, 418, 580

LOVEJOY, A. O., Retrospective Anticipations of Carnegie Foundation, 414

LOVEWELL, J. T., Kansas Acad. of Sci., 357

LOWELL, P., Evolution of Worlds, C. L. POOR, 506

ULL, R. S., Entelodontidae, 147

McCALLA, A., Microscopical Soc. of Illinois, 200

MACCURDY, G. G., Anthropology at the Amer. Assoc., 350

MANN, C. R., Amer. Federation of Teachers of Math. and Natural Sciences, 515; Education at the Amer. Assoc., 591; Hodson on Science Teaching, 706

Marchal, E. and E., Aposporie et Sexualité chez les Mousses, A. F. BLAKESLEE, 905

MARK, K. L., Northeastern Sect. Amer. Chem. Soc., 240, 920

Mars, Geometrical Canals of, R. G. AITKEN, 114; Planet, C. D. PERRINE, 665; Water Vapor on, C. G. ABBOT, 987; Spectrum of, W. W. CAMPBELL, S. ALBRECHT, 990

MARSH, M. C., Biol. Soc. of Washington, 36

Martonne, de, E., Géographie Physique, A. E. ORTMANN, 669

MARX, G. H., The Assistant Professor, 401, 441, 488; Students at Foreign Universities, 659

Massachusetts Inst. Technology, Research Laboratory of Physical Chemistry, 810

Mathematical Soc., Amer., F. N. COLE, 118, 478, 800

Mathematics and Astron. at the Amer. Assoc., G. A. MILLER, 153

MATTHES, F. E., Geol. Soc. of Washington, 319, 518, 718; Air Currents in Mountain Valleys, 577

Maxwell-Lefroy, H., Indian Insect Life, E. P. FELT, 625

MEAD, G. H., Social Consciousness, 688

Medical, Profession, Future of, V. C. VAUGHAN, 127; Assoc., Amer., 983

Medicine, and Hygiene, International Congress of, 103, 408; as a Profession, H. WILLIAMS, 601

Metaphysics and Mendelism, J. F. ABBOTT, 68

Meteorite in Norwood, Mass., F. W. VERY, 143, 415; E. O. HOVEY, 298; G. F. LOUGHLIN, 418, 580

Meteorology and Climatology, Recent Progress in, A. H. PALMER, 390, 952

Michigan Acad. of Sci., Sect. Zool., R. W. HEGNER, 840

Microscopical Soc. of Ills., A. McCALLA, 200

MILLER, D. C., Report of Boston Meeting of Amer. Assoc., 76

MILLER, G. A., Math. and Astron. at the Amer. Assoc., 153; Sexagesimal System and Division of Circle, 431; Encyclopédie des Sciences Mathématiques, 621

MILLER, H. A., Incomes of College Graduates, 199

MINOT, C. S., Elizabeth Thompson Sci. Fund, 409

Miocene Horizons in Georgia, T. W. VAUGHAN, 833

MOODIE, R. L., Amphibia, 233

MOORE, G. T., Botanical Soc. of Amer., 433

MORGAN, T. H., Adaptation, 201

MORSE, M., Pulsations in Scyphomedusæ, 544

Moses, A. J., and C. L. Parsons, Mineralogy, C. PALACHE, 625

Mosquito Habits and Control, F. KNAB, 868

Müller, G., Die Chemische Industrie, F. G. WIECHMANN, 670

MUNROE, C. E., Chemical Industries of Amer., 561

Museums, F. C. BAKER, 221; A. R. CROOK, 579; Amer., Directory of, P. M. REA, 456

Naturalists, Amer. Soc. of, Presidential Address, 201; Boston Meeting, H. McE. KNOWER, 234

Nature Study, Agricultural, 775

NEAL, H. V., Amer. Soc. of Zoologists, Central Branch, 834

Needham, President, Resignation of, 734

NEWMAN, H. H., The Sperm Whale, 631

New York Acad. of Sci., Biology, L. HUSSAKOF, 439, 600, 640, 918

Nezara, Chromosomes of, E. B. WILSON, 788

NIPHER, F. E., Relativity and some Consequences, 113; Double Images, 152; Canal-ray Effects in Open Air Discharge, 628; Critical Spark Length, 744; Definition of Force, 950  
Nomenclature, Commission on, C. W. STILES, 150  
North Carolina Acad. of Sci., E. W. GUDGER, 914  
NOYES, W. A., Allen's Commercial Organic Analysis, 458

Ocean's Age, G. F. BECKER, 459, 509  
Enothera Lamarckiana, R. R. GATES, 425  
Olcott, W. T., In Starland with a three-inch Telescope, C. L. P., 72  
Ophidian Notes, H. A. ALLARD, 426  
OPIE, E. L., Soc. for Biol. and Exper. Medicine, 119, 679, 719, 917  
Optically Active Substances, J. B. TINGLE, 193  
ORTMANN, A. E., de Martonne's Géographie Physique, 669; Weismannism, 815  
OSBORN, H. F., Memorial to Morris K. Jesup, 337

P., C. L., Fauth's Moon in Modern Astronomy, 71; Olcott's In Starland, 72  
PALACHE, C., Tutton's Crystalline Structure, 623; Moses and Parson's Mineralogy, 625  
Paleogeography, Principles of, B. WILLIS, 241; of North America, E. BLACKWELDER, 909  
Paleontologic Correlation, 407  
Paleontological Research, 197  
Palladino, Eusapia, 776  
PALMER, A. H., Recent Progress in Meteorology and Climatology, 390, 952  
Parasites, Mallophagan, V. L. KELLOGG, 33  
PARKER, G. H., Word of Explanation, 299  
Pawlow, J. F. ABBOTT, 580  
PEABODY, C. H., Field's Story of Submarine, 743  
Pendulum, Horizontal, Long-period Deviations, B. M. VARNEY, 230  
PERBINE, C. D., The Planet Mars, 665  
Peterson, O. A., Entelodontidae, R. S. LULL, 147  
Pettigrew, J. B., Design in Nature, T. D. A. COCKRELL, 707  
Pharmacology and Exper. Therapeutics, Amer. Soc. for, R. HUNT, 236  
Philosophical Soc., of Wash., R. L. FARIS, 79, 278, 438, 557, 757, 919, 959; Amer., 280, 400, 560, 992; Elections to, 659; H. C. RICHARDS, 869  
Physics, Teaching, K. E. GUTHÉ, 1; Debt to Metaphysics, H. CREW, 521; at the Amer. Assoc., A. D. COLE, 588; Specialization in Teaching, J. F. WOODHULL, 729; Instruments of Confusion in, H. L. TERRY, 731  
Physiological Soc., Amer., A. J. CARLSON, 397  
Phytopathological Soc., Amer., C. L. SHEAR, 746, 790  
PIPER, C. V., Botany and Agriculture, 889  
Plankton, O. KLOTZ, 857; Tropical, Excessive Light and, C. E. WOODRUFF, 618  
Pleistocene of Missouri Valley, B. SHIMEK, 75  
POOR, C. L., Lowell on Evolution of Worlds, 506  
POTTS, L. M., Ball Lightning, 144  
Poulton, E. B., The Origin of Species, H. W. CONN, 424  
Princeton University Graduate School, 946  
Professor, Assistant, Problem of, G. H. MARX, 401, 441, 488

Psychology of Social Consciousness, G. H. MEAD, 688  
Publications, Scientific, for Free Distribution, 138  
Pulsations in Scyphomedusæ deprived of Marginal Organs, M. MORSE, 544

Quotations, 26, 299, 348, 419, 860, 988

Racial Differences in Mental Traits, R. S. WOODWORTH, 171  
RAND, H. W., Amer. Soc. Zool., Eastern Branch, 462  
RANDALL, D. L., Amer. Chem. Soc., 268, 307  
RANSOM, J. H., Indiana Acad. of Sci., 355  
REA, P. M., Directory of Amer. Museums, 456  
REED, M. A., New Blood Picture, 629  
Relativity, F. E. NIPHER, 113; D. F. COMSTOCK, 767  
RENOUF, E., Clowes and Coleman's Quantitative Chemical Analysis, 582  
Research Institution in Palestine, D. FAIRCHILD, 376

RICHARDS, H. C., Amer. Philosophical Soc., 869  
RICHARDS, H. M., Chemical Stimulation, 52  
RILEY, W. A., Relation of Flies to Disease, 263; Dipylidium caninum in Child, 349; Kircher and Germ Theory of Disease, 666  
RITTER, W. E., Hubrecht's Die Säugetierontogenese, 542  
Rockefeller Foundation, 379  
ROGERS, A. F., Study of Rocks without Use of Microscope, 739  
ROSA, E. B., Int. Electrical Standards, 608  
ROTCH, A. L., Turner on Aerial Navigation, 507  
Rowe, S. H., Habit Formation and Science of Education, E. J. SWIFT, 672  
RUSSELL, H. L., Conn on Agricultural Bacteriology, 787

St. Louis, Acad. of Sci., M. J. KLEM, 120; Chem. Soc., and St. Louis Sect., Amer. Chem. Soc., R. N. SHREVE, G. LANG, JR., 720  
Sanitary Science at Columbia University, 138  
San Luis Valley, Colo., C. E. SIEBENTHAL, 744  
SCHAFFER, A. A., Aquarium Aerator, 955  
Science, as Subject-matter and as Method, J. DEWEY, 121; Advancement of, Facts vs., B. C. GRUENBERG, 579; and Industry, L. H. BAEKELAND, 841; Practical, J. M. COULTER, 881  
Scientific, Notes and News, 22, 64, 104, 139, 186, 211, 260, 293, 340, 379, 409, 452, 497, 534, 574, 614, 662, 696, 735, 781, 811, 852, 900, 946, 984; Books, 27, 69, 115, 146, 193, 221, 264, 301, 346, 386, 420, 456, 504, 540, 580, 621, 668, 705, 740, 785, 822, 860, 903, 951, 989; Journals and Articles, 29, 72, 117, 149, 267, 389, 459, 508, 540, 853, 744, 907, 952  
Seed Analysts, Assoc. of, E. BROWN, 477, 598  
Seismology, National Bureau of, 534; W. H. HOBBS, 260  
Sexagesimal System and Division of Circle, G. A. MILLER, 431  
Shackleton, E. H., Heart of Antarctic, A. W. GREELY, 822  
Sharpe, R. B., Handlist of Birds, J. A. ALLEN, 265  
SHEAR, C. L., Amer. Phytopathological Soc., 746, 790

SHIMEK, B., Pleistocene of Missouri Valley, 75  
 SHREVE, R. N., and G. LANG, JR., St. Louis Sect. Amer. Chem. Soc. and St. Louis Chem. Soc., 720  
 SIEBENTHAL, C. E., San Luis Valley, Colo., 744  
 Silkworms, J. F. ABBOTT, 586  
 SIMONS, L. G., N. Y. Sect., Assoc. of Teachers of Math. of Middle States, 80  
 SKINNER, H., Germ Theory of Disease, 617  
 SMITH, E. R., Assoc. of Teachers of Math. of Middle States, 80  
 Social and Economic Science at the Amer. Assoc., J. F. CROWELL, 879  
 Societies and Academies, 36, 78, 119, 159, 200, 238, 277, 319, 355, 399, 438, 477, 516, 557, 598, 640, 676, 718, 757, 799, 839, 880, 917, 959, 992  
 SONON, M. D., Chemistry in Schools, 979  
 Solutions, Study of, L. KAHLENBERG, 41  
 Spalding, V. M., Desert Plants, F. E. LLOYD, 863  
 Spark Length, Critical, F. E. NIPHER, 744  
 Special Articles, 32, 75, 152, 230, 306, 349, 394, 425, 514, 544, 586, 628, 675, 715, 744, 788, 830, 867, 912, 955, 990  
 Spectroscope, Cross Wires in, C. M. CLARK, 344  
 Standards, Electrical, E. B. ROSA, 608  
 STEINMETZ, C. P., Radiation, Light and Illumination, E. P. HYDE, 540  
 STILES, C. W., Zoological Nomenclature, 150  
 Stimulation, Chemical, H. M. RICHARDS, 52  
 STOCKBERGER, W. W., Bot. Soc. of Wash., 38, 78, 360, 676, 880  
 STOREY, T. A., Davidson on Human Body and Health, 115; Gulick Hygiene Series, 785  
 Students, in German Universities, E. O. JORDAN, 137; at Foreign Universities, G. H. MARX, 659  
 Survey, Magnetic, of China, 211  
 SWAIN, G. F., Engineering as a Profession, 81  
 SWANTON, J. R., Anthropol. Soc. of Wash., 37, 159  
 SWIFT, E. J., Rowe on Habit Formation and Science of Education, 672

TALBOT, H. P., Correlation of Secondary School and College Instruction in Chemistry, 961  
 Termites, Luminosity of, J. C. BRANNER, 24  
 TERRY, H. L., Teaching Physics, 731  
 Tertiaries, Lower, of Louisiana, G. D. HARRIS, 502  
 Thompson, Elizabeth, Science Fund, C. S. MINOT, 409  
 THOMSON, E., Comets and the Sun, 772  
 THORNDIKE, E. L., Collegiate Instruction, 428  
 TINGLE, J. B., Optically Active Substances, 198  
 Titchener, E. B., Experimental Psychology of Thought Processes, R. S. WOODWORTH, 224  
 TOMBO, JR., R., Engineering Student Statistics, 145; Harvard Graduate School, 621; Statistics of Foreign Universities, 693  
 Torrey Bot. Club, P. WILSON, 39, 277  
 TOURNEUX, F., *Précis d'Embryologie Humaine*, L. W. WILLIAMS, 705  
 TOWNSEND, C. H. T., Muscid Larvae Entoparasitic on Arthropods, 195  
 TRELEASE, W., Botanical Gardens, 681  
 Turner, C. C., Aerial Navigation, A. L. ROTCH, 507

Tutton, A. E. H., Crystalline Structure and Chemical Constitution, C. PALACHE, 623  
 Uexküll, von, J., Umwelt und Innenwelt der Tiere, O. C. GLASER, 303  
 University and Educational News, 24, 67, 108, 142, 189, 218, 262, 297, 344, 383, 413, 455, 500, 537, 576, 617, 665, 700, 738, 784, 815, 856, 902, 949, 986  
 Utah Acad. of Sciences, A. O. GARRETT, 720

Variations Graphically, C. BARUS, 867  
 VARNEY, B. M., Winds in Canadian Selkirks, 192; Horizontal Pendulums, 230  
 VAUGHAN, T. W., Miocene Horizons in Ga., 833  
 VAUGHAN, V. C., The Medical Profession, 127  
 VENABLE, F. P., Garrett on Periodic Law, 29  
 VERY, F. W., Fall of Meteorite in Norwood, Mass., 143; Norwood Meteorite a Fraud, 415  
 Vries, H. de, Mutation Theory, C. S. GAGER, 740

WAGNER, G., Cisco from Lake Michigan, 957  
 WARD, H. B., Austen on Blood-sucking Flies, 904  
 WARD, R. DEC., Hann's Klimatologie, 305  
 WASHBURN, M. F., Coupin and Lea on Animal Ingenuity, 951  
 Weevil, Cotton-boll, W. D. HUNTER, 151  
 Weismannism, A. E. ORTMANN, 815  
 Whale, Sperm, H. H. NEWMAN, 631  
 WHEELER, W. M., Friese's Die Bienen Afrikas, 580  
 Wheeler, W. M., Ants, T. D. A. COCKERELL, 860  
 WHIPPLE, G. M., Rapid and Deep Breathing, 26  
 Whitfield, Robert Parr, L. P. G., 774  
 WHITNEY, W. R., Chemistry of Light, 161  
 WHITSIT, J. E., High School Chemistry, 974  
 WIECHMANN, F. G., Müller's Die Chemische Industrie, 670  
 WILLIAMS, H., Medicine as a Profession, 601  
 WILLIAMS, L. W., Tourneux's *Précis d'Embryologie Humaine*, 705  
 WILLIS, B., Principles of Paleogeography, 241  
 WILLS, A. P., Lorentz on Theory of Electrons, 221  
 WILSON, E. B., Chromosomes of Nezara, 788  
 WILSON, P., Torrey Bot. Club, 39, 277  
 Winds in Canadian Selkirks, B. M. VARNEY, 192  
 WOODHULL, J. F., Russell and Kelly's First-year Science, 544; Physics Teaching, 729  
 WOODRUFF, C. E., Excessive Light and Tropical Plankton, 618  
 WOODWORTH, R. S., Racial Differences in Mental Traits, 171; Titchener's Psychology of Thought Processes, 224

X., University of Minnesota and Carnegie Foundation, 701

Z., Length of Service Pensions of Carnegie Foundation, 784  
 Zoological Congress at Graz, 293  
 Zoologists, Amer., Soc. of, Eastern Branch, H. W. RAND, 462; Central Branch, 640; H. V. NEAL, 834  
 Zoology, Teaching of, W. J. BAUMGARTNER, 673  
 Zones, Catalogue of, W. S. EICHELBERGER, 461

